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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/649,328	08/26/2003	Paul A. Knight	ISOT-018	4606

7590

11/10/2005

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EXAMINER

PAPE, ZACHARY

ART UNIT

PAPER NUMBER

2835

DATE MAILED: 11/10/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

**Office Action Summary**

Application No.

10/649,328

Applicant(s)

KNIGHT ET AL.

Examiner

Zachary M. Pape

Art Unit

2835

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

**Period for Reply**

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

**Status**

- 1) ☒ Responsive to communication(s) filed on 08 November 2005.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

**Disposition of Claims**

- 4) ☒ Claim(s) 1-20 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1-20 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

**Application Papers**

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 08 September 2005 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

**Priority under 35 U.S.C. § 119**

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some \* c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
  2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

**Attachment(s)**

- |  |   |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892)  | 4) <input type="checkbox"/> Interview Summary (PTO-413)<br>Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948)                                   | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152)             |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)<br>Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____  |

## **DETAILED ACTION**

### ***Response to Amendment***

- The following detailed action is in response to the correspondence filed 9/8/2005.
- The examiner acknowledges amended Fig 1 and has subsequently withdrawn the objection to said drawings.
- The examiner acknowledges amended claim 4 and has subsequently withdrawn the objection to said claim 4.
- Claims 1-20 stand rejected per the detailed action below.

### ***Response to Arguments***

1. Applicant's arguments, see pages 6-12, filed 9/8/2005, with respect to the rejection(s) of claim(s) 1-17 under 35 U.S.C. 103(a) have been fully considered and are persuasive. Therefore, the rejection has been withdrawn. However, upon further consideration, a new ground(s) of rejection is made in view of Przilas et al. (US 5,907,473).

### ***Claim Rejections - 35 USC § 102***

2. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

Claims 1-18, 20 are rejected under 35 U.S.C. 102(b) as being anticipated by Przilas et al. (US 5,907,473).

With respect to claim 1, Przilas et al. teaches a spray cool system with a dry access chamber, comprising: a chassis (Generally 100) having a wet chamber (22) and a dry chamber (Defined by the walls of the chassis 100), wherein said wet chamber is for thermally managing an electronic device by applying liquid coolant to an electronic device within said wet chamber; a dry access door (16) removably attached about said dry chamber; and a wet access door (26) removably attached about said wet chamber, wherein said wet access door is capable of sealing said wet chamber (Via gasket 28)

With respect to claim 11, Przilas et al. further teaches a spray cool system with a dry access chamber, comprising: a chassis (100) having a wet chamber (22) and a dry chamber (Adjacent 22, generally 100), wherein said wet chamber is for thermally managing an electronic device by applying liquid coolant to an electronic device within said wet chamber; wherein said wet chamber includes a coolant spray system (53) for thermally managing an electronic device; wherein said dry chamber includes a coolant system (Since the heat exchanger (62') is external to 22, it is within the dry chamber) fluidly connected to said coolant spray system (Column 8, Lines 22-24); a dry access door (16) removably attached about said dry chamber; and a wet access door (26) removably attached about said wet chamber, wherein said wet access door is capable of sealing said wet chamber (Via gasket 28).

With respect to claim 2, Przilas et al. further teaches that said wet chamber includes a coolant spray system (As illustrated in Fig 2, also see Column 4 Line 66 – Column 5, Line 2).

With respect to claims 3 and 12, Przilas et al. further teaches that said coolant spray system is comprised of components chosen from the group consisting essentially of a spray unit (53), a sensor, a card cage, an intake valve and a condenser.

With respect to claim 4, Przilas et al. further teaches that said coolant spray system is fluidly connected to a coolant system positioned within said dry chamber (As illustrated in Fig 3a, the heat exchanger is located outside of the wet chamber (22) which implies that the heat exchanger is located within the dry chamber. See also Column 8 Lines 22-24).

With respect to claim 5, Przilas et al. further teaches that the dry chamber includes a coolant system fluidly connected to said wet chamber (Via heat exchanger system (62')) as illustrated in Fig 3a, see also Column 8, Lines 22-24).

With respect to claims 6 and 13, Przilas et al. further teaches that the coolant system is fluidly connected to a spray unit (68', wherein 37 is the spray) positioned within said wet chamber (As illustrated in Fig 3a).

With respect to claims 7 and 14, Przilas et al. further teaches that the coolant system is comprised of components chosen from the group consisting essentially of a filter, a pump (50), a heater, a sensor and a separator.

With respect to claims 8 and 15, Przilas et al. further teaches that said dry access door (16) is capable of sealing said dry chamber. Further the examiner further

notes that it has been held that the recitation that an element is "capable of" performing a function is not a positive limitation but only require the ability to so perform. It does not constitute a limitation in any patentable sense. In re Hutchison, 69 USPQ 138.

With respect to claims 9 and 16, Przilas et al. further teaches that the dry chamber is adjacent to said wet chamber within said chassis (As illustrated in Fig 2).

With respect to claims 10 and 17, Przilas et al. further teaches that the dry chamber is sealed from said wet chamber (See Fig 2, also see Column 4, Lines 16-24).

With respect to claims 18 and 20, Przilas et al. further teaches that the dry access door is movably or pivotally attached to said chassis (16 illustrated as attached in Fig 1, however 15 is removable from the chassis (100) thus the dry access door is removable attached to the chassis).

### ***Claim Rejections - 35 USC § 103***

3. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

Claim 19 is rejected under 35 U.S.C. 103(a) as being unpatentable over Przilas et al. in view of Crowley (US 6,452,788).

With respect to claim 19, Przilas teaches the limitations of claim 1 above, but fails to teach that the dry access door is pivotally attached to the chassis. Crowley teaches the conventionality of pivotally attaching a door (70) to a chassis (50). It would have

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been obvious to one of ordinary skill in the art at the time the invention was made to combine the pivoting features of Crowley with the spray cooling system of Przilas to provide a pivoting feature on the dry access door (16). Pivotal attachment of the dry access door (16) to the chassis allows the door to remain attached to the chassis and hence the user cannot lose the door. Further allowing the door to pivot makes the door easier to operate since it will not need to be fully unsecured from the chassis (i.e. all the fastening members wouldn't have to be removed).

### ***Conclusion***

4. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.

US 2005/0138833 filed by the same applicant and prosecuting attorney (Paul Knight, and Michael Neustel respectively) on 08/25/2003 which teaches a dry-wet thermal management system.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Zachary M. Pape whose telephone number is 571-272-2201. The examiner can normally be reached on Mon. - Thur. & every other Fri. (8:00am - 5:00pm).

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Lynn Feild can be reached at 571-272-2092. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

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Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

ZMP

A handwritten signature in dark ink, appearing to read 'A. Vortman', with a horizontal line extending to the right.

**ANATOLY VORTMAN  
PRIMARY EXAMINER**